Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

May 04, 2021

Federally-Enforceable District-Origin Operating Permit (FEDOOP) Statement of Basis

Source/Owner: Anderson Wood Products Company
1381 Beech Street
Louisville, KY 40211

Application Documents:	See Table I-9		
Draft Permit:	03/24/2021		
Permitting Engineer:	Randy Schoenbaechler	Permit Number:	O-0016-21-F
Plant ID: 0016	SIC: 2426	NAICS: 321918	

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

This permit removes conditions from Greenhouse Gases, updates the insignificant activities listed, and renews the operating permit.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO2), carbon monoxide (CO), particulate matter less than 10 microns (PM10), particulate matter less than 2.5 microns (PM2.5,), and sulfur dioxide (SO2). Jefferson County is classified as a nonattainment area for ozone (O3).

Permit Application Type:

☐ Initial issuance

Permit Revision
- ☐ Administrative
- ☐ Minor
- ☐ Significant

☒ Permit renewal

Compliance Summary:

☒ Compliance certification signed
☐ Source is out of compliance
☐ Compliance schedule included
☒ Source is operating in compliance

I Source Information

1. Product Description:

The source creates dimension woods for component parts, examples, furniture, stair rails, and wood panels.

2. Process Description:

Wood compontents are cut and shaped on the shop floor. Particulate matter is conveyed pneumatically throuch a series of cyclones and baghouses. The captured wood scrap is stored in a silo to be used in the wood fired boiler or shipped offsite by truck.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U1	On (1) pneumatic wood waste conveying system which includes four (4) process cyclones (B, C, D, and F)
	One (1) Carborundum baghouse to control emissions from cyclones B, C, D, and F
	One (1) Carter Day fabric filter to the wood waste silo
U2	One (1) wood-fired boiler
	One (1) multiple cyclone make Zurn
U3	One (1) truck loading operation
U4	Spray application of Nelsonite (wood stabilizer)
U5	One (1) cold solvent vapor degreaser not equipped with a secondary reservoir

5. Fugitive Sources:

The source identified no fugitive sources of emissions.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-0016-15-F	09/01/2015	10/02/2015	Initial	Initial Permit Issuance

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-0016-21-F	03/24/2021	05/04/2021	Renewal	Permit Renewal and removal of Greenhouse gas requirements

7. Construction Permit History:

None since last issuance of operating permit.

8. Application and Related Documents

Document Number	Date	Description
134134 134262 134297 134467 136227 136242 138704	3/4/2020 3/5/2020 3/6/2020 3/10/2020 3/31/2020 4/1/2020 4/27/2020	Requests for Application
140777	5/15/2020	Permit Application
141541 142307 149112 150102 155253 155250 160672 167480 167479 160518 160676 160670 163047 163789 169344 171175 171792 171975	5/22/2020 6/5/2020 6/29/2020 6/30/2020 7/13/2020 7/13/2020 7/23/2020 7/23/2020 7/23/2020 7/23/2020 7/24/2020 7/24/2020 8/11/2020 8/14/2020 8/26/2020 8/31/2020 9/10/2020 9/15/2020	Requests for Information and Replies

9. Emission Summary

Pollutant	District Calculated PTE (tpy)	Pollutant that triggered Major Source Status (based on PTE)
CO	35.4	No
NO_x	29.1	No
SO_2	1.46	No
PM_{10}	124.40	Yes
VOC	20.378	No
Total HAPs	6.0	No
Single HAP > 1 tpy		
Hydrogen Chloride	1.11	No
Potassium	2.27	No

10. Applicable Requirements

☐	40 CFR 60	☒	SIP	☒	40 CFR 63
☐	40 CFR 61	☒	District Origin	☒	Other

11. Referenced Federal Regulations:

40 CFR 63 Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

12. Non-Applicable Regulations:

None

II Regulatory Analysis

1. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Anderson Wood Products Company does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

2. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
2.17	Compliance with Emission Standards and Maintenance Requirements	Federally Enforceable District Origin Operating Permits
6.07	Standards of Performance for Existing Indirect Heat Exchangers	Indirect Heat Exchanger greater than 10 MMBTU/hr
6.09	Standards of Performance for Existing Process Operations	Applies to each existing affected facility which is commenced before September 1, 1976.
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	Cold Solvent Parts Washer is subject to VOC emission standards.
6.24	Standard of Performance for Existing Sources Using Organic Materials	Standard of Performance for Existing Sources Using Organic Materials
40 CFR 63 Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

b. Plantwide

i. Anderson Wood Products Company is potentially major for PM_{10}. Regulation 2.17 – F*ederally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the PM_{10} less than 25 tons per year, to be classified as a synthetic minor (FEDOOP) source.

ii. Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Anderson Wood Products Company has requested emission limits of less than 25 tons per year for all regulated air pollutants to be considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.

iii. Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

iv. Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

Reporting Period	Report Due Date
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

c. Emission Unit U1 – Pneumatic Conveying System

EP	Description	Applicable Regulations
E1A	One (1) wood waste conveyor system	6.09
E1B	One (1) process cyclone (B)	6.09
E1C	One (1) process cyclone (C)	6.09
E1D	One (1) process cyclone (D)	6.09
E1E	One (1) process cyclone (F)	6.09

i. Standards

(1) $PM/PM_{10}/PM_{2.5}$

(a) The source shall not allow PM emissions to exceed hourly and 12 consecutive month limits for equipment in accordance with District Permit 189-88-C effective 12/16/88.

(2) Opacity

(a) Regulation 6.09, section 3.1 establishes an opacity standard of less than 20%.

d. Emission Unit U2 – Wood-Fired Boiler

EP	Description	Applicable Regulations
E2A	One (1) wood fired boiler, 13.3 MMBtu/hr, make Lewanee, model 7L289	6.07, 40 CFR 63 Subpart JJJJJJ

i. Standards

(1) HAP

(a) 40 CFR 63 Subpart JJJJJJ establishes work practice standards and operating limits for the Boiler

(2) Opacity

(a) Regulation 6.07, section 3.2 establishes opacity standards for the boilers.

(3) $PM/PM_{10}/PM_{2.5}$

(a) The wood fired boiler is subject to Regulation 6.07. The emission standard for PM is determined in accordance with Regulation 6.07, section 3.1 as follows:
PM limit $= 0.9634*(13.3)^{-0.2356} = 0.52$ lb/MMBtu

(4) SO_2

(a) The wood fired boiler is subject to Regulation 6.07. The emission standard for SO2 is determined in accordance with Regulation 6.07, section 4.1 as follows:
SO_2 limit $= 9.46*(13.3)^{-0.374} = 3.59$ lb/MMBtu

ii. Monitoring and Recordkeeping

(1) HAP

(a) 40 CFR 63 Subpart JJJJJJ establishes monitoring and recordkeeping for the Boiler.

iii. Reporting

(1) HAP

(a) 40 CFR 63 Subpart JJJJJJ establishes reporting for the Boiler.

e. Emission Unit U3 – Truck Loading

EP	Description	Applicable Regulations
E3A	One (1) Wood Waste Silo	6.09
E3B	One (1) Screw Conveyor	6.09
E3C	One (1) Cleated Belt Conveyor	6.09

i. Standards

(1) $PM/PM_{10}/PM_{2.5}$

(a) The source shall not allow PM emissions to exceed hourly limits for each piece of equipment in accordance with Regulation 6.09, section 3.2 as follows:
PM lb/hr limit = 4.10*(process weight ton/hr) $^{0.67}$, where P is expressed in tons/hr.

(2) Opacity

(a) Regulation 6.09, section 3.1 establishes an opacity standard of less than 20%.

f. Emission Unit U4 – Wood Stabilizer

EP	Description	Applicable Regulations
E4A	One (1) wood stabilizer spray	6.24

i. Standards

(1) VOC

(a) The source shall not allow VOC emissions of Class I, II, or III solvents to exceed limits for each piece of equipment in accordance with Regulation 6.24, section 3.3.

(b) The source shall not allow VOC emissions to exceed hourly and 12 consecutive month limits for equipment in accordance with District Permit 82-89-C effective 3/30/89.

g. Emission Unit U5 – Cold Solvent Vapor Degreaser

EP	Description	Applicable Regulations
E5A	One (1) cold solvent vapor degreaser not equipped with a secondary reservoir	6.18

i. Standards

(1) VOC

(a) Regulation 6.18, section 4 establishes operating standards for parts washers.

III Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

Date	Regulation Violated	Settlement
8/3/1993	1.14	Agreement
9/28/1994	6.07	Agreement
11/13/2000	1.14	Agreement
12/8/2006	2.03	Agreement
11/16/2006	2.03	Agreement
1/29/2008	1.07	Agreement
1/29/2008	2.03	Agreement
5/30/2008	1.09	Agreement
5/30/2008	1.14	Agreement
5/30/2008	2.17	Agreement
3/2/2010	1.07	Agreement
3/2/2010	1.14	Agreement
6/26/12	1.14	Agreement
6/26/12	1.07	Agreement
3/17/2015	5.02	Board Order

6. Calculation Methodology or Other Approved Method:

Unit 1

Controlled Conveyance PM, PM_{10}, or $PM_{2.5}$ emissions (lb/period) = (Amount in pounds unloaded from the silo for the period) * (0.575/0.425) * (41/41/1000) * (0.02) * (% Time $_{controlled}$)

Uncontrolled Conveyance PM, PM_{10}, or $PM_{2.5}$ emissions (lb/period) = (Amount in pounds unloaded from the silo for the bypass period) * (0.575/0.425) * (41/41/1000) * (% Time

$_{uncontrolled}$)

Where: 0.575/0.425 = ratio of product to waste;
41 lb/1000 ft^3 $_{product}$ is the emission factor for PM per AP-42 11.12;
Density = 41 lb/ft^3;
0.02 = (1-98% control efficiency);
% Time $_{controlled}$ = (Hours of operation – bypass)/ (Hours of operation);
% Time $_{uncontrolled}$ = (Hours of bypass) / (Hours of operation)

Controlled Silo loading PM, PM_{10}, or $PM_{2.5}$ emissions (ton/period) = (Amount in pounds unloaded from the silo for the period) * (3.14 lb PM/ton wood dust/ 2000 lb/ton) * (0.001) * (0.02) * (% Time $_{controlled}$)

Uncontrolled Silo loading PM, PM_{10}, or $PM_{2.5}$ emissions (ton/period) = (Amount in pounds unloaded from the silo for the period) * (3.14 lb PM/ton wood dust/ 2000 lb/ton) * (0.001) * (% Time $_{uncontrolled}$)

Where: 3.14 equals the assumed PM, PM_{10}, or $PM_{2.5}$ emission loss based on AP-42, 10.9-7
0.001 = ratio of wood dust to wood waste
0.02 = (1-98% control efficiency)
% Time $_{controlled}$ = (Hours of operation – bypass)/ (Hours of operation);
% Time $_{uncontrolled}$ = (Hours of bypass) / (Hours of operation)

Unit 2

Wood Boiler Pollutant emissions (ton/period) = Hours of Operation * (13.3 MMBtu/hr * EF lb/MMBtu) / 2000 lb/ton * (1-CE)

Where: 13.3 MMBtu/hr is the rating of the boiler
CE= 70% control efficiency for PM, PM_{10}, or $PM_{2.5}$ only
EF = Emission Factor listed below:

Wood fired Boiler	EF	Units	Basis
NOx	0.49	lb/mmbtu	AP-42, 1.6
CO	0.6	lb/mmbtu	AP-42, 1.6
PM	0.4	lb/mmbtu	AP-42, 1.6
PM_{10}	0.36	lb/mmbtu	AP-42, 1.6
$PM_{2.5}$	0.31	lb/mmbtu	AP-42, 1.6
SO2	0.025	lb/mmbtu	AP-42, 1.6
VOC	0.017	lb/mmbtu	AP-42, 1.6
HAP	1.03E-01	lb/mmbtu	AP-42, 1.6
Acenaphthene	9.10E-07	lb/mmbtu	AP-42, 1.6
Acenaphthylene	5.00E-06	lb/mmbtu	AP-42, 1.6
Acetaldehyde	8.30E-04	lb/mmbtu	AP-42, 1.6
Acetone	1.90E-04	lb/mmbtu	AP-42, 1.6
Acetophenone	3.20E-09	lb/mmbtu	AP-42, 1.6
Acrolein	4.00E-03	lb/mmbtu	AP-42, 1.6

Wood fired Boiler	EF	Units	Basis
Anthracene	3.00E-06	lb/mmbtu	AP-42, 1.6
Benzaldehyde	8.50E-07	lb/mmbtu	AP-42, 1.6
Benzene	4.20E-03	lb/mmbtu	AP-42, 1.6
Benzo(a)anthracene	6.50E-08	lb/mmbtu	AP-42, 1.6
Benzo(a)pyrene	2.60E-06	lb/mmbtu	AP-42, 1.6
Benzo(b)fluoranthene	1.00E-07	lb/mmbtu	AP-42, 1.6
Benzo(e)pyrene	2.60E-09	lb/mmbtu	AP-42, 1.6
Benzo(g,h,i)perylene	9.30E-08	lb/mmbtu	AP-42, 1.6
Benzo(j,k)fluoranthene	1.60E-07	lb/mmbtu	AP-42, 1.6
Benzo(k)fluoranthene	3.60E-08	lb/mmbtu	AP-42, 1.6
Benzoic acid	4.70E-08	lb/mmbtu	AP-42, 1.6
bis(2-Ethylhexyl)phthalate	4.70E-08	lb/mmbtu	AP-42, 1.6
Bromomethane	1.50E-05	lb/mmbtu	AP-42, 1.6
2-Butanone (MEK)	5.40E-06	lb/mmbtu	AP-42, 1.6
Carbazole	1.80E-06	lb/mmbtu	AP-42, 1.6
Carbon tetrachloride	4.50E-05	lb/mmbtu	AP-42, 1.6
Chlorine	7.90E-04	lb/mmbtu	AP-42, 1.6
Chlorobenzene	3.30E-05	lb/mmbtu	AP-42, 1.6
Chloroform	2.80E-05	lb/mmbtu	AP-42, 1.6
Chloromethane	2.30E-05	lb/mmbtu	AP-42, 1.6
2-Chloronaphthalene	2.40E-09	lb/mmbtu	AP-42, 1.6
2-Chlorophenol	2.40E-08	lb/mmbtu	AP-42, 1.6
Chrysene	3.80E-08	lb/mmbtu	AP-42, 1.6
Crotonaldehyde	9.90E-06	lb/mmbtu	AP-42, 1.6
Decachlorobiphenyl	2.70E-10	lb/mmbtu	AP-42, 1.6
Dibenzo(a,h)anthracene	9.10E-09	lb/mmbtu	AP-42, 1.6
1,2-Dibromoethene	5.50E-05	lb/mmbtu	AP-42, 1.6
Dichlorobiphenyl	7.40E-10	lb/mmbtu	AP-42, 1.6
1,2-Dichloroethane	2.90E-05	lb/mmbtu	AP-42, 1.6
Dichloromethane	2.90E-04	lb/mmbtu	AP-42, 1.6
1,2-Dichloropropane	3.30E-05	lb/mmbtu	AP-42, 1.6
2,4-Dinitrophenol	1.80E-07	lb/mmbtu	AP-42, 1.6
Ethylbenzene	3.10E-05	lb/mmbtu	AP-42, 1.6
Fluoranthene	1.60E-06	lb/mmbtu	AP-42, 1.6
Fluorene	3.40E-06	lb/mmbtu	AP-42, 1.6
Formaldehyde	4.40E-03	lb/mmbtu	AP-42, 1.6
Heptachlorobiphenyl	6.60E-11	lb/mmbtu	AP-42, 1.6
Hexachlorobiphenyl	5.50E-10	lb/mmbtu	AP-42, 1.6
Hexanal	7.00E-06	lb/mmbtu	AP-42, 1.6
Heptachlorodibenzo-p-dioxins	2.00E-09	lb/mmbtu	AP-42, 1.6

Wood fired Boiler	EF	Units	Basis
Heptachlorodibenzo-p-furans	2.40E-10	lb/mmbtu	AP-42, 1.6
Hexachlorodibenzo-p-dioxins	1.60E-06	lb/mmbtu	AP-42, 1.6
Hexachlorodibenzo-p-furans	2.80E-10	lb/mmbtu	AP-42, 1.6
Hydrogen chloride	1.90E-02	lb/mmbtu	AP-42, 1.6
Indeno(1,2,3,c,d)pyrene	8.70E-08	lb/mmbtu	AP-42, 1.6
Isobutyraldehyde	1.20E-05	lb/mmbtu	AP-42, 1.6
Methane	2.10E-02	lb/mmbtu	AP-42, 1.6
2-Methylnaphthalene	1.60E-07	lb/mmbtu	AP-42, 1.6
Monochlorobiphenyl	2.20E-10	lb/mmbtu	AP-42, 1.6
Naphthalene	9.70E-05	lb/mmbtu	AP-42, 1.6
2-Nitrophenol	2.40E-07	lb/mmbtu	AP-42, 1.6
4-Nitrophenol	1.10E-07	lb/mmbtu	AP-42, 1.6
Octachlorodibenzo-p-dioxins	6.60E-08	lb/mmbtu	AP-42, 1.6
Octachlorodibenzo-p-furans	8.80E-11	lb/mmbtu	AP-42, 1.6
Pentachlorodibenzo-p-dioxins	1.50E-09	lb/mmbtu	AP-42, 1.6
Pentachlorodibenzo-p-furans	4.20E-10	lb/mmbtu	AP-42, 1.6
Pentachlorobiphenyl	1.20E-09	lb/mmbtu	AP-42, 1.6
Pentachlorophenol	5.10E-08	lb/mmbtu	AP-42, 1.6
Perylene	5.20E-10	lb/mmbtu	AP-42, 1.6
Phenanthrene	7.00E-06	lb/mmbtu	AP-42, 1.6
Phenol	5.10E-05	lb/mmbtu	AP-42, 1.6
Propanal	3.20E-06	lb/mmbtu	AP-42, 1.6
Propionaldehyde	6.10E-05	lb/mmbtu	AP-42, 1.6
Pyrene	3.70E-06	lb/mmbtu	AP-42, 1.6
Styrene	1.90E-03	lb/mmbtu	AP-42, 1.6
2,3,7,8-Tetrachlorodibenzo-p-dioxins	8.60E-12	lb/mmbtu	AP-42, 1.6
Tetrachlorodibenzo-p-dioxins	4.70E-10	lb/mmbtu	AP-42, 1.6
2,3,7,8-Tetrachlorodibenzo-p-furans	9.00E-11	lb/mmbtu	AP-42, 1.6
Tetrachlorodibenzo-p-furans	7.50E-10	lb/mmbtu	AP-42, 1.6
Tetrachlorobiphenyl	2.50E-09	lb/mmbtu	AP-42, 1.6
Tetrachloroethene	3.80E-05	lb/mmbtu	AP-42, 1.6
o-Tolualdehyde	7.20E-06	lb/mmbtu	AP-42, 1.6
p-Tolualdehyde	1.10E-05	lb/mmbtu	AP-42, 1.6
Toluene	9.20E-04	lb/mmbtu	AP-42, 1.6
Trichlorobiphenyl	2.60E-09	lb/mmbtu	AP-42, 1.6
1,1,1-Trichloroethane	3.10E-05	lb/mmbtu	AP-42, 1.6
Trichloroethene	3.00E-05	lb/mmbtu	AP-42, 1.6
Trichlorofluoromethane	4.10E-05	lb/mmbtu	AP-42, 1.6
2,4,6-Trichlorophenol	2.20E-08	lb/mmbtu	AP-42, 1.6
Vinyl Chloride	1.80E-05	lb/mmbtu	AP-42, 1.6

Wood fired Boiler	EF	Units	Basis
Xylene	2.50E-05	lb/mmbtu	AP-42, 1.6
Antimony	7.90E-06	lb/mmbtu	AP-42, 1.6
Arsenic	2.20E-05	lb/mmbtu	AP-42, 1.6
Barium	1.70E-04	lb/mmbtu	AP-42, 1.6
Beryllium	1.10E-06	lb/mmbtu	AP-42, 1.6
Cadmium	4.10E-06	lb/mmbtu	AP-42, 1.6
Chromium, total	2.10E-05	lb/mmbtu	AP-42, 1.6
Chromium, hexavalent	3.50E-06	lb/mmbtu	AP-42, 1.6
Cobalt	6.50E-06	lb/mmbtu	AP-42, 1.6
Copper	4.90E-05	lb/mmbtu	AP-42, 1.6
Iron	9.90E-04	lb/mmbtu	AP-42, 1.6
Lead	4.80E-05	lb/mmbtu	AP-42, 1.6
Manganese	1.60E-03	lb/mmbtu	AP-42, 1.6
Mercury	3.50E-06	lb/mmbtu	AP-42, 1.6
Molybdenum	2.10E-06	lb/mmbtu	AP-42, 1.6
Nickel	3.30E-05	lb/mmbtu	AP-42, 1.6
Phosphorus	2.70E-05	lb/mmbtu	AP-42, 1.6
Potassium	3.90E-02	lb/mmbtu	AP-42, 1.6
Selenium	2.80E-06	lb/mmbtu	AP-42, 1.6
Silver	1.70E-03	lb/mmbtu	AP-42, 1.6
Sodium	3.60E-04	lb/mmbtu	AP-42, 1.6
Strontium	1.00E-05	lb/mmbtu	AP-42, 1.6
Tin	2.30E-05	lb/mmbtu	AP-42, 1.6
Titanium	2.00E-05	lb/mmbtu	AP-42, 1.6
Vanadium	9.80E-07	lb/mmbtu	AP-42, 1.6
Yttrium	3.00E-07	lb/mmbtu	AP-42, 1.6
Zinc	4.20E-04	lb/mmbtu	AP-42, 1.6

Wood Boiler PM emissions (ton/period) = Hours of Operation * (13.3 MMBtu/hr * 0.4 lb/MMBtu) / 2000 lb/ton * (0.3)

Wood Boiler PM_{10} emissions (ton/month) = Hours of Operation * (13.3 MMBtu/hr * 0.36 lb/MMBtu) / 2000 lb/ton * (0.3)

Wood Boiler $PM_{2.5}$ emissions (ton/month) = Hours of Operation * (13.3 MMBtu/hr * 0.31 lb/MMBtu) / 2000 lb/ton * (0.3)

Where: 13.3 MMBtu/hr is the rating of the boiler
0.4 lb/MMBtu is the emission factor for PM per AP-42
0.36 lb/MMBtu is the emission factor for PM_{10} per AP-42
0.31 lb/MMBtu is the emission factor for $PM_{2.5}$ per AP-42
0.3 = (1-70% control efficiency)

Unit 3

Truck Loading PM emissions (ton/period) = (Amount in pounds of wood waste loaded into trucks for the period) * (0.061 lb/ton / 2000 lb/ton)

Truck Loading PM_{10} emissions (ton /period) = (Amount in pounds of wood waste loaded into trucks for the period) * (0.034 lb/ton / 2000 lb/ton)

Truck Loading $PM_{2.5}$ emissions (ton /period) = (Amount in pounds of wood waste loaded into trucks for the period) * (0.0058 lb/ton / 2000 lb/ton)

Where: 0.061 lb/ton is the emission factor for PM per AP-42, 9.9-1
0.034 lb/ton is the emission factor for PM_{10} per AP-42, 9.9-1
0.0058 lb/ton is the emission factor for $PM_{2.5}$ per AP-42, 9.9-1

Unit 4

Spray Application of Wood Stabilizer VOC emissions (ton/period) = (Amount in gallons of stabilizer sprayed for the period) * (5.9 lb/gallon / 2000 lb/ton)

Unit 5

Cold Solvent Degreaser pollutant emissions (ton /period) = (Amount in gallons of solvent purchased) * (Pollutant content of Solvent in lb/gal / 2000 lb/ton)

Insignificant Activities

Diesel Tank VOC emissions assume 0.000085 tpy

Natural Gas Boiler pollutant emissions (Amount in millions of cubic feet of natural gas burned) * (EF lb/MMBtu / 2000 lb/ton), or assume the following tpy values

Where: EF = Emission Factor listed below with tpy values:

Natural Gas Boiler	EF	Units	Basis	TPY
NOx	100	lb/mmcf	AP-42, 1.4-1	0.54
CO	84	lb/mmcf	AP-42, 1.4-1	0.45
PM	0.52	lb/mmcf	2011 NEI, EPA	0.00281
PM_{10}	0.52	lb/mmcf	2011 NEI, EPA	0.00281
$PM_{2.5}$	0.43	lb/mmcf	2011 NEI, EPA	0.00233
SO2	0.6	lb/mmcf	AP-42, 1.4-2	0.00
VOC	5.5	lb/mmcf	AP-42, 1.4-2	0.03
HAP	1.02E-02	lb/mmcf		0.0001
2-Methylnaphthalene	9.10E-07	lb/mmcf	AP-42, 1.4-3	4.92E-09
3-Methylchloranthrene	5.00E-06	lb/mmcf	AP-42, 1.4-3	2.71E-08
DMBA	8.30E-04	lb/mmcf	AP-42, 1.4-3	4.49E-06
Acenaphthene	1.90E-04	lb/mmcf	AP-42, 1.4-3	1.03E-06
Acenaphthylene	3.20E-09	lb/mmcf	AP-42, 1.4-3	1.73E-11
Anthracene	4.00E-03	lb/mmcf	AP-42, 1.4-3	2.16E-05
Benz(a)anthracene	3.00E-06	lb/mmcf	AP-42, 1.4-3	1.62E-08

Natural Gas Boiler	EF	Units	Basis	TPY
Benzene	8.50E-07	lb/mmcf	AP-42, 1.4-3	4.60E-09
Benzo(a)pyrene	4.20E-03	lb/mmcf	AP-42, 1.4-3	2.27E-05
Benzo(b)fluoranthene	6.50E-08	lb/mmcf	AP-42, 1.4-3	3.52E-10
Benzo(g,h,i)perylene	2.60E-06	lb/mmcf	AP-42, 1.4-3	1.41E-08
Benzo(k)fluoranthene	1.00E-07	lb/mmcf	AP-42, 1.4-3	5.41E-10
Chrysene	2.60E-09	lb/mmcf	AP-42, 1.4-3	1.41E-11
Dibenzo(a,h)anthracene	9.30E-08	lb/mmcf	AP-42, 1.4-3	5.03E-10
Dichlorobenzene	1.60E-07	lb/mmcf	AP-42, 1.4-3	8.66E-10
Fluoranthene	3.60E-08	lb/mmcf	AP-42, 1.4-3	1.95E-10
Fluorene	4.70E-08	lb/mmcf	AP-42, 1.4-3	2.54E-10
Formaldehyde	4.70E-08	lb/mmcf	AP-42, 1.4-3	2.54E-10
Hexane	1.50E-05	lb/mmcf	AP-42, 1.4-3	8.12E-08
Indeno(1,2,3-cd)pyrene	5.40E-06	lb/mmcf	AP-42, 1.4-3	2.92E-08
Naphthalene	1.80E-06	lb/mmcf	AP-42, 1.4-3	9.74E-09
Phenanathrene	4.50E-05	lb/mmcf	AP-42, 1.4-3	2.43E-07
Pyrene	7.90E-04	lb/mmcf	AP-42, 1.4-3	4.27E-06
Toluene	3.30E-05	lb/mmcf	AP-42, 1.4-3	1.79E-07
Arsenic	2.80E-05	lb/mmcf	AP-42, 1.4-4	1.51E-07
Beryllium	2.30E-05	lb/mmcf	AP-42, 1.4-4	1.24E-07
Cadmium	2.40E-09	lb/mmcf	AP-42, 1.4-4	1.30E-11
Chromium, total	2.40E-08	lb/mmcf	AP-42, 1.4-4	1.30E-10
Chromium, hexavalent	8.16E-09	lb/mmcf	Engineering Judgement	4.42E-11
Cobalt	3.80E-08	lb/mmcf	AP-42, 1.4-4	2.06E-10
Lead	9.90E-06	lb/mmcf	AP-42, 1.4-2	5.36E-08
Manganese	2.70E-10	lb/mmcf	AP-42, 1.4-4	1.46E-12
Mercury	9.10E-09	lb/mmcf	AP-42, 1.4-4	4.92E-11
Nickel	5.50E-05	lb/mmcf	AP-42, 1.4-4	2.98E-07
Selenium	7.40E-10	lb/mmcf	AP-42, 1.4-4	4.00E-12

7. Insignificant Activities

Description	Quantity	PTE	Basis
Brazing, Soldering, or Welding Equipment	2	<1 tpy material usage reported by company	Regulation 1.02 Appendix A
Woodworking except for conveying hogging or burning wood/sawdust (See Attachment B for list)	80	Accounted for in conveyance unit	Regulation 1.02 Appendix A
Diesel Storage Tank	1	< 0.01 tpy VOC	Regulation 1.02 Appendix A

Description	Quantity	PTE	Basis
Boiler (1.26 MMBTU Natural Gas)	1	NOx 0.54 tpy	Regulation 1.02 Appendix A
Silo E1S (See Emission Unit U1)	1	0.16 PM_{10}	Regulation 1.02
Screw Conveyor E3A (See Emission Unit U3)	1	0.35 PM_{10}	Regulation 1.02
Cleated Belt Conveyor E3B (See Emission Unit U3)	1	0.35 PM_{10}	Regulation 1.02

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.
3. The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16, section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16, section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) Basis of Regulation Applicability for IA units